IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Canceled).

Claim 24 (Currently Amended): A computer readable tangible storage medium having a computer program stored thereon for managing quality of service, the program representing middleware and comprising executable instructions that cause a computer to:

configure an application programming interface as a data model describing quality-of-service adaptation paths as specified by quality-of-service aware mobile multimedia applications using said application programming interface, in order to manage quality-of-service and mobility-aware network connections with other applications, a quality-of-service adaptation path defining an adaptation policy in terms of alternative quality-of-service contracts identifying alternative quality-of-service specifications and rules for switching between the alternative quality-of-service contracts based on a comparison of the contracted QoS specification with the actual quality-of-service, and

wherein said middleware is adapted to repeatedly measure the actual quality-of service and to repeatedly select one of the alternative quality-of-service contracts according to the rules for switching between the alternative quality-of-service contracts based on a comparison of the contracted quality-of-service specifications with the actual quality-of-service, the quality-of-service specifications of the selected quality-of-service contract describing a currently to be achieved quality-of-service for one or more network connections, and

wherein the adaptation paths are modeled as hierarchical finite state machines, each quality-of-service contract of an adaptation path corresponding to a different state of a hierarchical finite state machine, said rules for switching between the alternative quality-of-

service contracts corresponding to transitions between the states of a hierarchical finite state machine and each hierarchical finite state machine comprising:

a finite state machine associated with a User Context, a finite state machine associated with an Application Context nested in said finite state machine associated with said User Context and a finite state machine associated with a Session Context nested in said finite state machine associated with said Application Context,

wherein said User Context, said Application Context and said Session Context each identify an arrangement of quality-of-service specifications enforceable through a set of streams belonging to a given user, multimedia application and telecommunication session, respectively, the given user partaking in the given telecommunication session by means of executing the given multimedia application,

wherein said middleware derives quality-of-service specifications of an Application Context from the quality-of-service specifications of the nesting User Context and quality-of-service specifications of a Session Context from the quality-of-service specifications of the nesting Application and ~~Session~~ User Contexts, and

wherein said arrangements of quality-of-service specifications identified in said User Context, said Application Context and said Session Context are specified by said multimedia applications using said application programming interface.

Claims 25-26 (Cancelled).

Claim 27 (Previously Presented): The computer readable tangible storage medium according to claim 24,

wherein the hierarchical finite state machines comprise controllable states in the context of streams at the lowermost level.

Claim 28 (Previously Presented): The computer readable tangible storage medium according to claim 24,

wherein quality-of-service synchronization is provided so as to ensure that some user's given constraints on quality-of-service are globally enforced throughout a given set of streams by applying a defined set of quality-of-service constraints to each stream of a set of streams.

Claim 29 (Previously Presented): The computer readable tangible storage medium according to claim 24,

wherein the specification of the quality-of-service contracts comprises hysteresis parameters for the transition between quality-of-service states time synchronization is provided for a multiplicity of related streams by a definition of time-synchronization constraints for related streams having the same destination.

Claim 30 (Previously Presented): The computer readable tangible storage medium according to claim 24,

wherein the specification of the quality-of-service contracts comprises utility parameters defining user's perceived utility factors associated with the respective quality-of-service contract.

Claim 31 (Previously Presented): The computer readable tangible storage medium according to claim 24, further comprising executable instructions that cause a computer to

provide an application handler unit to offer said application programming interface for providing quality-of-service aware mobile multimedia applications with the possibility of managing network connections with other applications.

Claim 32 (Previously Presented): The computer readable tangible storage medium according to claim 31,

wherein the application handler unit registers requests for notification events from applications and generates such events whenever the corresponding triggering conditions occur.

Claim 33 (Previously Presented): The computer readable tangible storage medium according to claim 31,

wherein the application handler unit operates on the basis of a data model comprising streams, quality-of-service context, quality-of-service associations and adaptation paths modeled as hierarchical finite state machines.

Claim 34 (Previously Presented): The computer readable tangible storage medium according to claim 33,

wherein the application handler unit creates for each unidirectional stream an instance of a chain controller for handling data plane and quality-of-service control plane related issues.

Claim 35 (Previously Presented): The computer readable tangible storage medium according to claim 34,

wherein the chain controller compares the quality-of-service requirements of a user with actual values of monitored parameters and configures a chain of multimedia components accordingly.

Claim 36 (Previously Presented): The computer readable tangible storage medium according to claim 35,

wherein the chain controller creates and manages a transport service interface socket, whereby said multimedia components directly exchange data through said transport service interface socket.

Claim 37 (Previously Presented): The computer readable tangible storage medium according to claim 34,

wherein the chain controller monitors and controls the local resources required to process the given stream by using resource managers.

Claim 38 (Previously Presented): The computer readable tangible storage medium according to claim 34, further comprising executable instructions that cause a computer to

configure a quality-of-service broker for managing overall local resources by managing the whole set of streams via the chain controllers.

Claim 39 (Previously Presented): The computer readable tangible storage medium according to claim 38,

wherein the quality-of-service broker manages system-wide resources via resource controllers.

Claim 40 (Previously Presented): The computer readable tangible storage medium according to claim 38,

wherein the quality-of-service broker controls end-to-end quality-of-service negotiation by using a session manager.

Claim 41 (Previously Presented): The computer readable tangible storage medium according to claim 38,

wherein the quality-of-service broker includes further functionality for downloading plug-ins corresponding to a given version of a data model which can not be handled by the application handler unit.

Claim 42 (Previously Presented): The computer readable tangible storage medium according to claim 41,

wherein the quality-of-service broker and the plug-ins are forming a quality-of-service broker cluster.

Claim 43 (Previously Presented): The computer readable tangible storage medium according to claim 34,

wherein the application handler unit and the various instances of the chain controller are forming an application handler cluster.

Claim 44 (Previously Presented): The computer readable tangible storage medium according to claim 42,

wherein the application handler cluster and the quality-of-service broker cluster are included in one open distributed processing capsule.

Claim 45 (Previously Presented): The computer readable tangible storage medium according to claim 42,

wherein the application handler cluster and the quality-of-service broker cluster are included in separate open distributed processing capsules.

Claim 46 (Previously Presented): The computer readable tangible storage medium according to claim 45,

wherein the application handler cluster being included in one open distributed processing capsule is installed on a given local node and the quality-of-service broker cluster being included in separate open distributed processing capsule is installed on a separate open distributed processing node, whereby a proxy quality-of-service broker is installed on the given local node.

Claim 47 (Cancelled).